UNITED STATES DEPARTMENT OF AGRICULTURE

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THE EXTENSION POULTRY HUSBANDMAN

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Division of Cooperative Extension, Cooperating,
H. L. Shrader, Senior Extension Poultry Husbandman.

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Contents

PARTICIPATION IN THE NATIONAL POULTRY IMPROVEMENT PLAN

By J. D. Sykes, Poultry Coordinator, U. S. D. A.

During the year ended June 30, 1939, breeders, hatcherymen, and flock owners in 44 States cooperated in the work of the National Poultry Improvement Plan. In the four years in which the plan has been in operation participation by breeders and commercial hatcherymen has practically doubled. Based upon a conservative estimate of 2 chicks produced per hatching-egg capacity, approximately 152,000,000 chicks were produced under the supervision of the national plan during the year. This is about 25 percent of the number raised on farms in the United States.

In the U. S. Approved breeding stage there are 37 States participating which is an increase of four over the number participating last year. In the two higher breeding stages, that is, U. S. Verified and U. S. Certified, there are 35 States which is an increase of five States over last year. With breeders in Iowa, South Carolina, and Wyoming participating in U.S. Record of Performance work for the first time this year there are now a total of 36 States cooperating in this breeding stage.

The most significant increase was the number of birds under official pullorum-control supervision. There were 6,772,031 birds that were officially tested for pullorum disease which is 78 percent of the total number of breeding birds under supervision in the plan. Forty-two States are now participating in the hatchery phase of the work.

Evidence of the desire and demand on the part of the industry to improve the quality of breeding stock through the use of pedigreed males is indicated by the continued increase in participation in the U.S.R.O.P. breeding stage. There were 30,081 U.S.R.O.P. females mated in 2,206 single male matings for the production of pedigreed stock during the current year. On the basis of a normal expectancy of producing five suitable breeding males from each hen during a normal breeding season there should be available 150,000 or more pedigreed males for flock improvement. Thus, it is conservatively estimated that there were produced during the season 100,000 more pedigreed males than are being used in the U.S.R.O.P., U.S. Certified, and U.S. Verified matings. There were 32,920 females that qualified as U.S.R.O.P. in the fall of 1938. This represents 30.4 percent of the original number entered. For the current year 29.9 percent of the number of pullets of that breed on the farm were entered as candidates for U.S.R.O.P.

	1936	1937	1938	1939
States participating.....	34	41	42	44
Hatcheries participating.....	1,017	1,239	1,478	2,033
Capacity of hatcheries, eggs.....	38,066,000	52,591,786	60,523,222	75,782,922
Breeding flocks.....	23,813	30,558	28,820	42,591
Breeding birds.....	3,522,409	6,535,907	5,948,498	8,653,568
U.S.R.O.P. breeders.....	(1)	301	298	317
U.S.R.O.P. flocks.....	190	352	353	396
Birds entered in trap-nest flocks.	66,547	112,202	108,183	124,937
U.S.R.O.P. breeding pens.....	(1)	1,675	1,966	2,206
Females in U.S.R.O.P. pens.....	8,207	22,322	26,135	30,081

(1) Complete data not available.

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SUMMARY OF REPORTS ON DEMONSTRATION FARM FLOCKS 1937-38[1/][2/]
(As furnished by 28 States)

State	Farms	Average size of flock	Eggs per hen	Mortality	Feed cost per hen	Income per hen		Feed cost per doz. eggs	Selling price per doz. eggs
						Total	Net		
	Number	Number	Number	Percent	Dollars	Dollars	Dollars	Cents	Cents
Alabama	269	136	167	----	1.58	3.16	----	----	24
Arkansas	16	126	140	----	----	----	----	----	19
California[3/]	36	1137	161	22.5	2.01	3.68	----	----	25.4
Connecticut	102	628	180	----	----	----	----	----	----
Florida	25	447	160	21.3	----	----	----	----	----
Georgia	49	240	168	19	----	4.16	----	----	25.6
Indiana	106	258	163	15	----	----	1.11	----	21.9
Iowa	22	279	147	12	1.01	2.93	1.59	----	----
Kansas	1460	----	159	----	----	----	----	----	----
Kentucky	100	----	162	----	1.98	----	2.14	----	----
Maryland	65	327	157	18.1	----	----	----	----	----
Minnesota	64	235	161	----	----	----	----	----	----
Mississippi	194	47	133	----	1.22	----	1.55	11.	20.4
Missouri									
(Farm flocks)	229	161	149	----	1.44	2.97	1.53[4/]	12.	19.8
(Comm. flocks)	19	518	181	----	1.65	3.48	1.83[4/]	11.8	20.6
Montana	49	233	172	15.0	1.59	----	2.09	12.	26.
Nebraska	17	396	152	20.2	1.46	3.69	----	----	19.7
New Hampshire	208	593	181	12.8	----	----	----	----	----
New Jersey	14	----	----	----	1.79	----	2.13[4/]	13.	28.
(Pullet flocks)	---	677	181	----	----	----	----	----	----
(Hen flocks)	----	384	136	----	----	----	----	----	----
New York	39	737	152	30	1.64	----	3.48	----	27
North Carolina	391	165	163	----	1.82	----	----	13.4	26.6
Oklahoma	----	165	149	----	1.11	----	1.43[4/]	----	19.
Rhode Island	14	----	----	----	1.79	----	2.13[4/]	13.	28.
South Carolina	100	184	145	23.0	2.16[5/]	4.14	1.58	26.6	----
Tennessee	54	97	141	----	2.07	----	1.24	----	----
Texas	260	125	176	16.8	1.52	----	1.60[4/]	10.8	21.2
Utah	135	521	162	28.9	----	----	----	----	----
Virginia	24	126	174	----	----	----	----	----	----
Wisconsin	----	253	177	17.0	----	----	----	10.8	21.1

1/ Records were submitted for the flock year beginning in November 1937 and ending in October 1938 by the following States: Ala., Ark., Calif., Ind., Iowa, Md., Minn., Mo., Neb., Okla., Va., and Tex.

2/ Records were submitted for the flock year beginning in October 1937 and ending in September 1938 by the following States: Conn., Fla., Ga., Kans., Ky., Miss., Mont., N.H., N.J., N.C., S.C., Utah, and Wis.

3/ For Los Angeles County

4/ Income over feed cost.

5/ Includes cost of raising young stock.

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----------o(The Extension Poultry Husbandman)o----------

OUT-OF-SEASON HATCHING STUDIES

A preliminary report of out-of-season hatching studies on Leghorns covering a two-year period was reported by Prof. Fred P. Jeffrey of the Poultry Department of New Jersey Agricultural Experiment Station at the New Jersey Baby Chick Show. The tabulated data are as reported by G. T. Klein in Featheredfax and New Jersey Experiment Station Report, 1938.

The chicks were all brooded under electric brooders and allowed free range when the weather permitted. A laying mash was fed from start to finish. Grain was hand-fed for the first 6 weeks. From 6 to 24 weeks the chicks were hopper-fed grain and mash. In the laying house, the birds were allowed free choice of mash, cracked corn, and whole oats. All eggs were weighed and 15 hour artificial lights were maintained. Rate-of-growth figures showed the average weight at 6 months of pullets hatched at the different times to be: January hatch, 3.1 lbs.; April hatch, 2.9 lbs.; June hatch, 2.9 lbs.; September hatch, 3.0 lbs.; November hatch, 3.3 lbs.

Feed Consumption - Mortality and Broiler Prices - 2 Year Summary

	January hatch	April hatch	June hatch	September hatch	November hatch
Feed consumption per pullet, 6 mos.	20.6 lbs.	18.8 lbs.	18.7 lbs.	21.9 lbs.	22.3 lbs.
Mortality, first 6 mos..	15.3%	16.3%	11.8%	8.8%	16.4%
Broiler prices - Flemington, N.J. per lb.	19.3¢	16.3¢	20.3¢	19.0¢	19.3¢

Cash Costs of Producing Pullets

Date of hatch	Cost (300 chicks)	Brooding cost	Total feed cost	Income from broilers	Cash cost per pullet produced
Jan. 15	$48.00	$21.70	$73.47	$49.62	$0.81
April 1	45.00	12.84	70.80	42.07	.73
June 15	42.00	6.90	82.50	60.59	.50
Sept. 1	45.00	11.76	96.99	54.07	.74
Nov. 1	48.00	19.29	74.50	47.62	.87

Egg Production, Egg Size, Market Returns, and Estimated Profit

Date of hatch	Annual egg production	% Large eggs	Laying house profit (egg receipts-feed cost)	Sale value of fowl at end of year (mortality considered)	Fowl prices (Flemington)	Net profit (pullet cost, laying house profit, sale of fowl)
Jan. 15	141	45	$1.17	$0.33	15.0¢	$0.79
Apr. 1	166	50	1.72	.36	17.0¢	1.35
June 15	162	41	1.72	.31	17.9¢	1.53
Sept. 1	152	41	1.66	.48	19.9¢	1.40
Nov. 1	149	38	1.62	.30	18.7¢	1.05

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POULTRY BREEDING PROJECTS

Many attempts have been made to develop an extension project on breeding. This has been very difficult because of the complicated subject and the apparent need for a large amount of personal service. The following poultry breeding projects are from Maryland and New Jersey 1939 plans of work. They are given here not with the idea of presenting a model but to show the progress that is being made along these lines. --H.L.S.

New Jersey

1. Statement of Need:

The number of sources of good breeding stock is pitifully small in comparison with the number of poultry flocks in the State. The majority of poultry breeders follow the practice of selecting breeding birds on the basis of first-year egg production and physical appearance. This method of breeder selection has been shown by experimental work to be a slow and uncertain means of establishing flocks of superior breeding worth. The variation in egg production and livability of flocks in egg-laying tests shows the need for a more definite type of breeding program. Recent research has shown that breed improvement can be accomplished more rapidly by the selection for individual characteristics on a family basis and the progeny test.

2. Purpose of Project:

(1) To instruct poultry breeders of the value of the "progeny test" method of breeding as a means of developing flocks of superior breeding worth.

(2) To assist cooperating poultry breeders in setting up a complete, simple, and accurate system of pedigree records.

3. Application of Project:

Planned for the poultryman particularly interested in developing a strain of poultry of superior breeding worth. Such poultrymen will be those having pens of birds in New Jersey's or other egg-laying contests. Poultrymen participating in New Jersey's plan of poultry standardization, especially the R.O.P. (Record of Performance) stage, and poultrymen doing home trapnesting of flocks.

4. Outline of Project:

Most breeding programs place too much emphasis on individual egg records. It has been shown repeatedly that the relationship between daughters' and dam's first-year production is very slight. Breed improvement can be realized more rapidly through selection for individual characteristics on a family basis and the progeny test. Evaluating the family as a breeding unit (using a minimum of five daughters), the following points and their value will be emphasized:

		Total Points
Livability		40
a. Percent hatchability of all eggs set	12.5	
b. Percent livability of chicks, 24 weeks	12.5	
c. Percent livability of pullets, 12 months	15.0	
Egg Production		50
a. Early maturity	5	
b. First 3 complete months' production	20	
c. Last 2 months of production	15	
d. Egg weight at 10 months	10	
Breed Characteristics		10
a. Body weight at 6 months	10	
		100

In using this system of family evaluation in selection of breeders, the perfect 100 points will probably never be realized. Its purpose is to give a definite comparative value or breeding index to each family.

Female breeders are to be selected from the upper half of the highest-scoring families and male breeders from the two or three high-scoring families.

5. Method of Carrying on Project:

County agent
- a. Arrange for all meetings.
- b. Assist in summary of county records.
- c. Follow up at specified times on record keeping.

Specialist
- a. Prepare all subject matter and record forms.
- b. State summary of records.
- c. Arrange educational program for all meetings.
- d. Provide record forms for one year to cooperating poultrymen.

Cooperator (poultryman)
- a. Keep flock-production and mortality records on all laying birds.
- b. Establish at least 1 pedigree pen of breeders.
- c. Keep all necessary pedigree records on forms provided or approved system of record keeping.
- d. Agree to report results as requested.

Meetings

One State-wide meeting in cooperation with the Poultry Department; namely, the Breeders' Institute. The purpose of this meeting will be to give the cooperating poultrymen the fundamental genetic principles underlying poultry breeding. The sectional meetings will not be held during 1939 due to the small number of cooperators and the fact that they are so scattered all over the State.

----------o(The Extension Poultry Husbandman)o----------

Last year was the first year of carrying out this project. The total enrollment was 40 cooperators in 17 counties. During the year 1939, no increase in enrollment is anticipated; rather a decrease will no doubt result.

Maryland

Purpose:

To demonstrate the value of progeny testing as a practical means of improving the production qualities of the poultry flock.

Current Situation:

Most of the so-called breeding work in Maryland has been done by mass selection. No one has yet been able to show that it is possible to make material progress in breeding through mass selection. It is with these thoughts in mind that this project was inaugurated. Progress in breeding work can be made through the production of males of known breeding value and the best way and most economical way is through progeny testing.

Procedure:

The hatcheryman, if he maintains a breeding flock, or some of his flock owners or both, will individually pen mate enough breeding birds to furnish enough chicks, this will satisfactorily test the breeding qualities of the male in question. The chicks will be hatched by the hatcheryman and wing-banded at hatching time to establish their identity.

In sections of the State where it is impossible to secure chicks from individually pen-mated birds, two lots of chicks of different breeding stages, one of the approved and the other of the certified breeding stage will be secured for use in this project.

The chicks will be brooded by the poultrymen and the pullets carried through one laying season.

All work will be closely supervised by the extension poultry specialist.

The pullets will be culled to 50 at the beginning of the laying season. This would make up two pens consisting of 25 birds each, each pen being sired by a different male.

Sufficient records will be kept so that it will be possible to identify males of superior breeding value.

Records to be kept:

(1) Incubation Record, (2) Inventory, (3) Brooding and Rearing Record, (4) Poultry Expenditures, (5) Receipts of Poultry and Eggs, (6) Monthly Poultry Summary Sheet, and (7) Annual Poultry Summary Sheet.

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EGG ROOM AND HUMIDOR FIELD TRIALS
PROJECT OUTLINE

Object: To determine what benefit, if any, may be obtained by holding eggs on the farm and at the assembling plant in insulated, cool, humidified egg rooms.

Cooperating agencies: Extension Service, (Reed S. Hansen)
Washington Co-op. (M. Wayne Miller) and
at least 5 farmers.

Date to begin: May 1, 1938

Duration: Probably 5 months.

Location: Cooperating farms; Co-op. Plant, Tacoma; P.E.P. headquarters New York.

Procedure: Eggs will be held on the farm in approved insulated egg room with humidor, cellar with sand floor, or other similar place. These eggs will be transported to the Tacoma Station under the best obtainable conditions. At the plant a special controlled egg room will be used. In short, conditions indicated as desirable and practical in the light of present information will be maintained from the nest to the eastern market. Comparison will be with the general run of eggs. This trial will be integrated with a pre-cooling experiment to determine the value of this procedure in connection with pre-cooling.

Duties of cooperators will be as follows:

The farm cooperators will:

1. Have egg room and humidor.
2. Gather eggs at least 3 times a day in perforated basket.
3. Cool eggs in humidor at least three hours before packing.
4. Keep empty cases in humidor at least 24 hours before packing.
5. Keep eggs in humidor until loaded for delivery.
6. Record temperature readings in humidor 3 times daily.
7. Attach history card properly filled out to each case of eggs.

The Extension Service through Reed Hansen will:

1. Get 5 or more poultrymen with a total of 5,000 birds to cooperate in the project.
2. Approve egg room and humidor set-up on each cooperating farm. State college recommendations to be guide followed.

3. Visit each cooperator at least twice each month to record humidity readings, collect temperature charts and check the general progress of the project.
4. Cooperate with Miller in tabulating results.

The co-op. through Wayne Miller will:

1. Provide the most favorable transportation conditions practicable from the farms to the receiving plant in Tacoma.
2. Record, when practicable, temperature in trucks.
3. Hold and candle eggs in cool, humid room until shipped. Temperature never to go above 50° F.
4. Record temperature and humidity in holding room.
5. Grade and record grades at receiving plant.
6. Ship eggs with regular shipments to New York. Eggs not to be held longer than usual practice. When precooled experimental cars are available for shipping eggs, eggs from this project will be included.
7. Record temperature in cars in transit.
8. Record temperature and humidity in room where eggs are held until regraded at New York.
9. Grade and record grades at New York.
10. Record time on truck, time of candling at Tacoma, time in transit, and time of candling at New York on the case history cards.
11. Provide record of grade of uncontrolled eggs for comparison with controlled eggs.
12. Cooperate with Reed Hansen in tabulating results.

Seven farm cooperators averaging 1,180 birds each, were secured. These cooperators started experimental shipments during the week ended May 21, except one who started on May 27 and another who started on June 6. On July 20 one cooperator was shipping pullet eggs almost exclusively and the use of his data was discontinued. By the end of July the production of pullet eggs was so heavy that it was makkng the results difficult to evaluate and the trial was concluded.

During the duration of these trials there was no rain, daily maximum temperatures ranged between 80° and 90°F. during about one-third of the period, and humidity ranged between 39 and 60 percent.

Grading Results, in Percent, for--

	All cooperators	Tacoma Association	All associations
Extras	50.62	42.43	42.21
Standards	16.94	29.74	29.48
L.D. Standards	3.25	3.57	3.74
Ranch	8.86	8.65	9.06
Chex	5.02	5.51	6.40
Med. Extras	6.35	5.60	5.39
Mixed Mediums	2.10	1.65	1.65
Pull. Extras	4.02	1.20	0.65
Mix. Pullet	2.22	0.76	0.48
Bloodspots	0.53	0.89	0.94
Smashed	0.09	--	--

Description and Summary of Egg Rooms on Cooperators' Farms

Location of egg room	Insulation	Temperature degrees F. Min.	Max.	Daily temperature rise, °F.	Humidity %	Source of moisture
Pit, cellar W.S.C.* type) humidor)	Poor	58	66	4	75 - 84	Natural
	4" of shavings	60	76	12	78 - 85	Wet curtain
N. side house	Fiber board	58	75	12 - 16	80 - 85	Wet curtain
Hillside) cellar)	12" of soil & insulated door	60	73	6	80 - 85	Water on floor.
W.S.C.* type) under coop)	Good - shavings	58	68	4 - 8	85 - 90	Wet curtain
Feed shed	Poor, 2" of shavings	61	78	10 - 11	73 - 79	Wet curtain
Basement) of house)	Poor, single layer of wood	61	72	5 - 10	60 - 75	Water on floor.

(Excerpts from county agent's annual report, Pierce Co., Wash.)

*Washington State College

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Additional copies of the bulletin entitled "How the Government Aids the Poultry Industry" are available for free distribution by extension workers. This is the same bulletin that was distributed at the World's Poultry Congress in Cleveland from the Government exhibit. Inquiries should be addressed to the Poultry Section, Agricultural Adjustment Administration, Washington, D. C.

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The Extension Service sponsored an evening meeting at the World's Poultry Congress in Cleveland, O., August 2, 1939. It was held at the Carter Hotel and consisted of a talk on egg marketing in Ireland by Sydney Smith, some very delightful music by Miss Lena Metzger, and a buffet supper in Smorgasbord style. The party was planned by a joint committee of County Agents Association and the Ohio Extension Professor's Association. This consisted of Mr.O. C. Croy, H.S. Ward, C.D. McGrew, Guy Hummon, Alma Garvin, R.E. Cray, Earl Jones and C.M. Ferguson. Mrs. G.E. Swanbeck, a member of a Scandinavian society of Cleveland gave the official touch to the Smorgasbord. Director H.C. Ramsower of Ohio presided.

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PROGRESS REPORT ON EGG QUALITY IMPROVEMENT PROJECT

By L. E. Francis, Assistant County Agent,
Washington County, Oregon.

An 18 percent increase in No. 1 grade eggs resulted from the use of proper humidity in farm egg storage in the humidor trials which were conducted by the county agent's office during the past year. The simple humidors which were used in the 1937 trials were used again. Half of each day's lay of eggs were placed in the humidor and half in the regular storage.

This year the trial was purposely conducted on a farm where an egg storage room was in use. This was done in order to establish definitely the fact that merely having a properly insulated room is not alone sufficient in maintaining egg quality.

The following table, which is a summary of all the figures and shows the percentage of the different commercial grades of eggs contained in each group, indicates very definitely the value of proper humidity for egg storage. It will be noted that in every case there is a larger percentage of the humidified eggs in the No. 1 grade.

	Percentage of eggs stored under condition indicated	
Grade	Humidified	Non-humidified
Large No. 1	60.8	44.3
Large No. 2	13.0	23.0
Large No. 3	6.8	12.5
Med. No. 1	14.5	13.4
Med. No. 2	1.2	2.6
Small No. 1	.8	.4
Trades	3.0	3.5
No. 1	76.0	58.1
No. 2	14.2	25.6
No. 3 and trades	9.8	16.0

All grading was done by the Pacific Cooperative Poultry Producers Association.

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The temperature at which eggs are kept immediately after they are laid is particularly important. Eggs that are left in warm nests for several hours lose more of their new-laid freshness during that time than they will lose in several days if they are cooled at once and kept cool. A new-laid egg is hot. I've broken the shell of an egg that has just been laid, put a meat thermometer down into the egg and watched the mercury climb up past 100°.

If those eggs are left in a warm place, the heat draws moisture out of them, the air space at the top of the egg gets larger, and the amount of thick white is reduced so the yolk isn't held in the center of the egg the way it should be. The best way I can describe the effect of cooling eggs immediately is to say it "sets" the freshness, as cooling sets gelatin, for example.

(From Frank Priebe's Weekly Letter to Poultry Raisers)

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HOW EGGS ARE USED

By W. D. Termohlen, Chief, Poultry Section, A.A.A., U.S.D.A.

Because approximately two-thirds of the income of poultry raisers in this country is credited to eggs it is of interest to look into the subject of egg uses. The accompanying chart was prepared as the result of a study made during 1935-37. In addition to utilization of available statistics of the Department of Agriculture, the information presented was obtained by examination of literature on the subject, questionnaires sent to operators of egg-breaking and egg-drying plants and representatives of some 200 trade associations whose members might make use of eggs.

At the bottom of the chart will be found a code for translating the estimates. For example, under frozen-egg products in the column headed "Mixed or Whole," the interpretation would be as follows: Of whole or mixed frozen or liquid eggs less than 1 percent are used for dining table purposes, 50 percent or more are used for bakery products; 1 to 4.9 percent are used for salad dressing; 1 to 4.9 percent are used for noodles or macaroni; 1 to 4.9 percent for ice cream or frozen custards; less than 1 percent are used for food beverages; and less than 1 percent are used in sausage manufacturing.

Since the above study was made there has been a revision in the production estimates by the Department and we present below new estimates of consumption or disappearance of eggs in the United States.

Consumption, other Uses, and loss of Eggs in the United States

Item	1935		1938	
	Dozens or dozens equivalent	Percent	Dozens or dozens equivalent	Percent
	(000)		(000)	
Shell-egg consumption	2,313,974	83.37	2,600,246	84.34
Liquid or frozen-egg consumption.....	171,827	6.19	186,893	6.06
Dried-egg consumption	38,857	1.40	26,642	.86
Used for hatching.....	112,821	4.07	116,153	3.77
Loss or waste as rots, broken, etc.*	137,938	4.97	153,233	4.97
Total.....	2,775,417	100.00	3,083,167	100.00

* This item is based on less factual information than the other items and is more subject to error.

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USES FOR EGGS IN THE UNITED STATES

ESTIMATES FOR 1935

(TOTAL EGG USE - ESTIMATED AT 2,538,009,515 DOZENS)

	SHELL EGGS		FROZEN EGG PRODUCTS						DRIED EGG PRODUCTS		
PERCENT OF TOTAL →	86.73	4.97	6.77						1.53		
USES	FRESH AND STORAGE	INEDIBLE AND WASTE	MIXED OR WHOLE	WHITES	PLAIN YOLK	SALT YOLK	SUGAR YOLK	GLYCERINE YOLK	MIXED OR WHOLE	ALBUMEN OR WHITES	YOLK
HUMAN FOOD USES											
DINING TABLE: HOME AND PUBLIC EATING PLACES	■		△	△	○		□		△		
BAKERY PRODUCTS	○		■	■	●		■	■	■	▲	●
CANDIES, CONFECTIONS, MARSHMALLOWS	△			▲						■	△
MAYONNAISE					●	■	▲	□	○		○
SALAD DRESSING			○		▲	●	○	○			
NOODLES, MACARONI			○		▲				○		□
ICE CREAM, FROZEN CUSTARDS, ICES	△		○	○	○		▲		○		●
FOOD BEVERAGES AND FOOD BEVERAGE POWDERS	△		△	△	△		△		○		○
PREPARED MERINGUE AND WHIPPING POWDERS										▲	
PREPARED PUDDINGS									○		○
PREPARED FLOURS									▲	○	▲
BAKING POWDER										△	
SAUSAGE MANUFACTURING			△								
ANIMAL FOOD USES											
DOG FOOD									○		△
BIRD FOOD									○		△
FISH FOOD										△	
FOX FOOD		△							△		
HOG FOOD		△									
COMMERCIAL FEEDS									△		
TECHNICAL USES											
LEATHER AND FUR TRADE		□								○	△
LITHOGRAPHING	△									○	
PHOTO-ENGRAVING	△									△	
CEMENTING CORK TO JAR AND BOTTLE CAPS										○	
PHARMACEUTICALS				△	△					○	
TEXTILE PRINTING										□	
PAINTS FOR ARTISTIC WORK										△	
PRINTING INK										△	
PHOTOGRAPHY										△	
GILDING BOOKS, LEATHER, CLOTH, AND FABRIKOID										△	
EGG SHAMPOO	△								△		
LOSS OR WASTE											
ROTS, BROKEN, ETC., NOT RECOVERED		■									
FLOCK REPRODUCTION (FRESH EGGS)											
COMMERCIAL HATCHING	○										
FARM HATCHING	○										

■ *50% or more* ▲ *10% to 24.9%* ○ *1% to 4.9%*

● *25% to 49.9%* □ *5% to 9.9%* △ *Under 1%*

U. S. DEPARTMENT OF AGRICULTURE NEG. 32133 A.A.A.

----------o(The Extension Poultry Husbandman)o----------

EGGS AND POULTRY IN COLD-STORAGE LOCKERS

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The use of freezer lockers for storing the family food supply is increasing rapidly. Almost 2,000 of these plants are reported in operation at the present time. Poultry comprises an important part of the food stored in these lockers and egg storage is receiving increased attention. A recent mimeographed publication of the U. S. Department of Agriculture, entitled "Cold-Storage Lockers for Preserving Farm-Dressed Meat" (A.H.D. No. 16), by K. F. Warner, Senior Extension Meat Specialist, contains two pages on the preparation of poultry and eggs.

With the increased use of lockers for preserving poultry products a new type of meeting for the poultry specialists is being requested. Demonstrations of the methods for preparing dressed poultry and eggs for freezing have already been held in Illinois by H. H. Alp, according to the Illinois Extension News Messenger.

Did you notice the number of people that watched the exhibit of egg breaking at the World's Poultry Congress? An egg-breaking demonstration for farm women attracts attention - I know because I have tried it. Copy the technique of the egg-breaking girls, cutting the shell on a knife edge, and opening the under side of the egg and you have the first step for your demonstration. Clean, sterilized containers of glass or tin (not paper), of convenient size, should be part of your equipment. Don't forget that egg yolks should be whipped or beaten before freezing.

In preparing poultry for freezer lockers the question of drawing the bird always arises. The full-drawn ready-for-the-oven bird put on the market by the quick-freezing corporations is gradually breaking down the city housewife's prejudice against cold storage poultry. In certain places the sale of fresh-killed, cut-up poultry is increasing. These housewives like to buy poultry by the piece for they can select the breasts or the backs according to the tastes of their family or the money available in the budget.

The housewives who patronize the freezer lockers are no different from their city cousins. They like to take a chicken from the locker all ready for cooking. The practical problem is to get the full-drawn or cut-up chicken into the low temperature before spoilage sets in. If the weather is warm and the farm many miles from the freezer locker, chilling the undrawn bird at home and drawing and washing it at the locker plant just before freezing may be the safer practice.

Provision to stop frozen poultry and eggs from drying out while in storage must be made. This is done by wrapping in vapor-proof paper or placing the product in a clean, sterilized airtight container.

The effect on the egg market of withdrawing eggs for freezing at a time of

flush production (and cheap prices), can be only estimated. With cheap eggs in storage the effect on the family would be a tendency to use a greater quantity. Possibly the home demonstration agents or food specialists would be interested in this means for adding more eggs to the winter diet.

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EGGS IN DEMAND WITH BLUE STAMP PURCHASES

The demand for eggs led the list according to a report of the Federal Surplus Commodity Corporation when it checked up on the purchases made with the blue stamps. The stamps had been distributed to relief clients in five cities and the report covers from July 16 to August 26, 1939. Almost one-fourth or 24.7 percent of the stamps were spent for eggs, 23.4 percent were spent for butter, 10.16 percent for flour, 12 percent for fresh fruits and 19.2 percent for fresh vegetables. Other items which were purchased in small amounts included corn meal, rice, dry beans, and dried prunes.

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HOW TO COOK POULTRY

Every few days since the closing of the World's Poultry Congress someone brings to my attention some part of that enormous exhibit that I failed to see. I wonder how many of the poultry specialists saw the posters on cooking poultry on display at Cleveland. This pictorial guide to successful ways to cook poultry has been published by the Bureau of Home Economics in a series of eight posters. On the following page these posters are described. Please note that the size is 20 x 30 inches and that the price is 50 cents per set. No free sets available.

The food specialists of the Bureau of Home Economics recommend cooking with moderate heat. This holds true for both old and young birds. In fact, rapid cooking with intense heat has a tendency to harden and toughen the tissues. Moderate heat, however, cooks poultry slowly and evenly and as a result the meat is juicy and full of flavor. Also, this system gives little shrinkage so that there is more left to serve on the table.

In addition to the charts the Bureau of Home Economics has issued an 8-page leaflet, entitled "Poultry Cooking." This leaflet is distributed free of charge and includes descriptions of broiling, frying, roasting, braising, stewing and steaming. The leaflet also gives recipes for that important part called the stuffing. The leaflet includes a time table for roasting young birds.

Two new film strips have been issued on cooking poultry. Series No. 560 on young birds consists of 51 frames and is sold for 55 cents. Series No. 561 on older birds, consists of 38 frames and is sold for 50 cents. They may be purchased from Photo Lab, Inc., 3825 Georgia Avenue, N.W., Washington, D. C., upon authorization by the Department. Lecture notes will be supplied with each strip purchased. - H.L.S.

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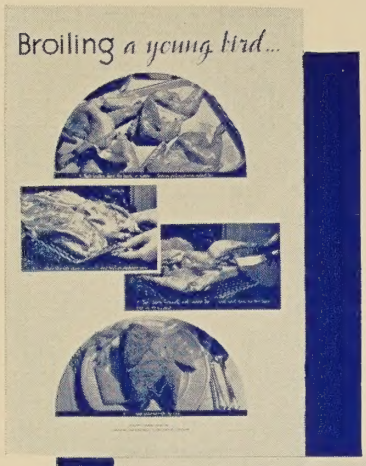
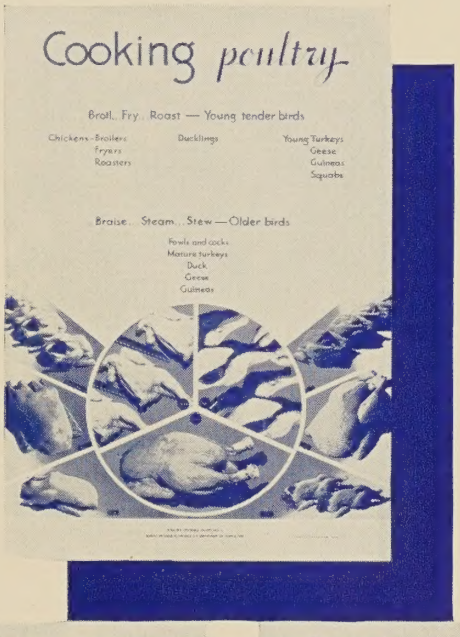
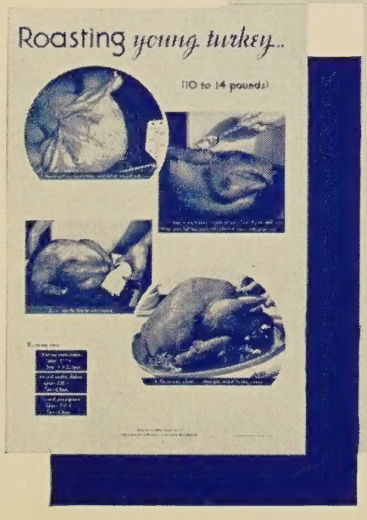
Poultry Cooking Charts

- Prepared by Bureau of Home Economics, United States Department of Agriculture
- Eight in the set
- Size, 20 by 30 inches
- Printed in black and white on heavy paper
- Price 50 cents . . . by set only
- Order from Superintendent of Documents, Government Printing Office, Washington, D. C. Cash, money order, or certified check must accompany the order







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